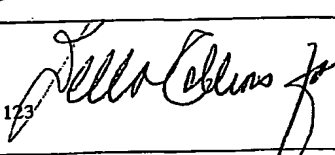


## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18666

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : CO7H 21/04; C12N 15/74 US CL : 536/23.5; 435/320.1 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 536/23.5; 435/320.1  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BOESE et al, Human endogenous retrovirus protein cORF supports cell transformation and associates with the promyelocytic leukemia zinc finger protein, Oncogene 07 September 2000, Vol. 19, No. 38, pages 4328-4336, see abstract and page 4334, column 1, lines 1-8 of first full paragraph.	1-4
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	
"E" earlier application or patent published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family	
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 05 NOVEMBER 2004	Date of mailing of the international search report 16 NOV 2004	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Richard Schnizer, Ph. D Telephone No. 703-308-1123 	

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18666

This International Search Authority has found 3 inventions claimed in the International Application covered by the claims indicated below:

Group 1, claim(s) 1-4, drawn to a nucleic acid vector encoding a selectable marker and comprising a sequence encoding a HML-2 subgroup polypeptide operatively linked to a promoter.

Group 2, claim(s) 24-28 drawn to a virus like particle comprising HML-2 gag polypeptides, and a first method of use as a medicament.

Group 3 claim(s) 29, drawn to a second method of use of a virus like particle comprising HML-2 gag polypeptides, as a diagnostic.

1. This International Searching Authority considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated below:

The inventions listed as Groups 1-3 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Independent claim 1, drawn to a nucleic acid vector encoding a selectable marker and comprising a sequence encoding a HML-2 polypeptide operably linked to a promoter is anticipated by Boese et al (Oncogene 19:4328-4336, 2000) who taught expression vectors comprising each of HML-2 env, gag, and cORF, as well as a neomycin phosphotransferase expression cassette. See abstract and page 4334, column 1, lines 1-8 of first full paragraph. As such, there can be no special technical feature, under PCT Rule 13.2, linking the claimed inventions.

Regarding groups 2 and 3, 37 CFR 1.475(b) allows for the combination of a composition and a first method of use, but does not allow for combining a second method of use. In this case, the first method of use of the virus like particle is as a medicament in the treatment of disease and the second method of use is in diagnosis of disease.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/18666

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claim Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3. ☐ Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-4

Remark on Protest

☐  
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.